ABSTRACT OF THE DISCLOSURE

The present invention provides a method for increasing the efficiency of gene transfer into target cells with a retrovirus. The transduction is effected by infecting target cells with a retrovirus in the presence of a mixture of a functional material having a retrovirus binding domain, and a second functional material having target cell binding domain. The target cells may be selected from the group of unipotential hematopoietic progenitor cells and erythrocyte precursor, specifically pluripotent stem cells or embryopalstic stem cells.